Precalculus Quiz 1.1 – 1.4

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| Instructor: | Miss Lewis | Name: |  |
| Class: | Precalculus | Date: |  |

Read each question carefully and select the best answer choice. Mark only on your own paper or the bubble sheet. You are required to show all of your work for starred (\*\*) problems. You will not receive credit for problems that are starred unless you show your work.

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| \*\*1) |  | Find an equation of the line that passes through the point (4, -1) and has a slope of |  |
|  | a. | y = - 1 |  |
|  | b. | y = + 1 |  |
|  | c. | y = + 3 |  |
|  | d. | y = - 3 |  |
|  | e. | None of these |  |

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| \*\*2) |  | Find an equation of the line that passes through the points (1, -3) and (4, 3). |
|  | a. | y = 2x – 5 |
|  | b. | y = -2x - 1 |
|  | c. | y = |
|  | d. | y = 2x + 5 |
|  | e. | None of these |

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| 3) |  | Determine which points lie on the line that contains the point (5, 7) with a slope of 0. |
|  | a. | (5, 0) |
|  | b. | (0, 7) |
|  | c. | (7, 5) |
|  | d. | All of these lie on the line. |
|  | e. | None of these lie on the line. |

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| 4) |  | Find the equation of the line that passes through the point (3, 10) parallel to the line x – 3y = 1. |
|  | a. | y = + 9 |
|  | b. | y = + 1 |
|  | c. | y = + 19 |
|  | d. | y = + 11 |
|  | e. | None of these |

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| \*\*5) |  | Find the equation of the line that passes through the point (6, 2) and is perpendicular to the line 3x + 2y = 2. |
|  | a. | y = + 11 |
|  | b. | y = + 6 |
|  | c. | y = - 7 |
|  | d. | y = - 2 |
|  | e. | None of these |

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| \*\*6) |  | In 1990, a company had a profit of $1.3 million. In 1992, the company had a profit of $1.2 million. Write a linear equation giving the profit *P*, in millions of dollars, in terms of the year, *t*. Let *t* = 0 represent 1990. |
|  | a. | P = -.1t + 1.3 |
|  | b. | P = -.01t + 1.3 |
|  | c. | P = -.05t + 1.3 |
|  | d. | P = -.2t + 1.3 |
|  | e. | None of these |

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| 7) |  | On weekends at TV repairman has an initial service charge of $30 plus a charge of $2.00 per minute. Find a linear equation giving the total charge, *c*, in terms of *x*, the number of minutes. |
|  | a. |  |
|  | b. | + 2 |
|  | c. |  |
|  | d. | + 2 |
|  | e. | None of these |

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| 8) |  | Find the x-intercept(s): 3x2 + 2y2 + 4xy – 12 = 0. |
|  | a. | ±, 0) |
|  | b. | (±, 0) |
|  | c. | (4, 0) |
|  | d. | (6, 0) |
|  | e. | None of these |

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| 9) |  | Which of the following does NOT represent y as a function of x? |
|  | a. | 3x2 + y = 9 |
|  | b. | x + 4y = 22 |
|  | c. | x + 2y2 = 6 |
|  | d. | y + 5x2 = 2 |
|  | e. | 9x + 3 = 2y |

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| 10) |  | Given |
|  | a. | -19 |
|  | b. | 5 |
|  | c. | 4 |
|  | d. | -5 |
|  | e. | None of these |

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| \*\*11) |  | Find the domain of the function: |
|  | a. | ( |
|  | b. | ( |
|  | c. | [-5, |
|  | d. | ( |
|  | e. | None of these |
| \*\*12 |  | Find the domain of the function: |
|  | a. | ( |
|  | b. | ( |
|  | c. | , |
|  | d. | , ( |
|  | e. | None of these |
| 13) |  | Find the range of the function shown below: |
|  | a. | ( |
|  | b. | ( |
|  | c. | [-5, |
|  | d. | ( |
|  | e. | None of these |
| 14) |  | Write the height *h* of the rectangle as a function of *x*. |
|  | a. | h(x) = 2x + 3 – x2 |
|  | b. | h(x) = x2 – 2x + 3 |
|  | c. | h(x) = x2 – 2x – 3 |
|  | d. | h(x) = 2x + 3 + x2 |
|  | e. | None of these |
| 15) |  | Determine the open intervals in which the function is increasing, decreasing, or constant. |
|  | a. | Increasing on ( |
|  | b. | Increasing on (decreasing on ( |
|  | c. | Increasing on (, (0, decreasing on (-2, 0) |
|  | d. | Increasing on (, decreasing on (3, 0) |
|  | e. | None of these |